BENZOYLCYCLOHEXANEDIONE DERIVATIVE AND HERBICIDE

Patent number: JP11021274
Publication date: 1999-01-26
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Classification:
- international: ***A01N35/10; C07C251/24; C07C251/48; C07C255/46; C07C317/24; C07C317/32; C07C317/44; C07C323/45; C07C323/63;*** *C07C251/86;* **A01N35/00; C07C251/00; C07C255/00; C07C317/00; C07C323/00;** (IPC1-7): C07C251/24; A01N35/10; C07C251/48; C07C251/86; C07C255/46; C07C317/24; C07C317/32; C07C317/44; C07C323/45; C07C323/63
- european:
Application number: JP19970190499 19970701
Priority number(s): JP19970190499 19970701

Abstract of **JP11021274**

PROBLEM TO BE SOLVED: To obtain the new subject compound capable of being industrially and advantageously synthesized, having sure effects with a lower dose, highly safe and useful as herbicides good in selectivity with crops. SOLUTION: This benzoylcyclohexanedione derivative is a compound expressed by the formula (R<1> and R<2> are each H, a halogen, a 1-6C alkyl, etc.; R<3> is H or a 1-6C alkyl; R<4> is hydroxy, a 1-6C alkyl, etc.; R<5> to R<10> are each cyano, formyl, etc.), e.g. 2-(2,4-dichloro-3-ethoxyiminomethyl)benzoyl-1,3- cyclohexanedione. The compound of the formula is obtained by reacting a 3-acyl compound, etc., with an amino compound in the presence of a catalyst (e.g.; an inorganic acid, etc., such as hydrochloric acid, sulfuric acid, etc.), by using a solvent (e.g.; methylene chloride, chloroform, etc.), hydrolyzing the obtained compound with an alkali such as NaOH, etc., an acid such as sulfuric acid, etc., then reacting by using an inorganic halogen compound such as thionyl chloride, etc., reacting a dione compound with the reaction product in the presence of a base and transforming the obtained product in the presence of a cyano compound, etc.